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NOTEWORTHY COLLECTIONS

LUPINUS CITRINUS Kell. (FABACEAE).—USA, CA, Madera Co., Indian Lakes Estates, Rd. 417, 3.1 km e. of jct. with Hwy 41 (T8S R21E S28 ne.¼), 685 m; 8 May 1974, *Wells s.n.* (CAS); 11 May 1980, *Hamon 8042A* and *8042B* (UC); 8 Jun 1980, *Bartel 1019* (UC). Open decomposing granite outcrops in digger pine/oak woodland. Associated with *Calyptridium pulchellum*, *Cryptantha flaccida*, *Mimulus bicolor*, *M. dudleyi*, *Parvisedum congdonii*, and *Pectocarya penicillata*.

Previous knowledge. Reported from Fresno and Mariposa Cos. (Munz, A Calif. fl. 1959) and also as Fresno Co. endemic (Jepson, Fl. Calif. 2:277. 1936; Abrams, Ill. fl. Pacific states 2:494. 1944). Mariposa Co. reports erroneous and probably based on either incorrect county notation on label [28 May 1903, *Congdon s.n.* (UC)] or label data transposed during remounting [11 May 1902, *Congdon s.n.* (MIN)].

Significance. First record for Madera Co., a range extension wnw. of 29 km. Considered rare and endangered by CNPS (Smith et al., CNPS Spec. Publ. 1, ed. 2. 1980). Under review as endangered species by the U.S. Fish & Wildlife Service (Fed. Reg. 45:82520. 1980).

STREPTANTHUS FARNSWORTHIANUS J. T. Howell. (BRASSICACEAE).—USA, CA: Madera Co., Mammoth Pool Rd., 3.5 km e. of jct. with Italian Bar Rd. (T9S R23E

S2 ne.¼ nw.¼), 1000 m: 29 May 1977, *Hemphill s.n.* (PUA); 8 Jun 1980, *Bartel 1020* (UC), scattered on exposed slate slope in *Quercus douglasii* woodland, associated with *Avena barbata*, *Lupinus benthamii*, *Mimulus guttatus*, *Pellaea mucronata*, and *Trifolium tridentata*; Fresno Co., Petersen Mill Rd., 0.4 km e. of jct. with old Tollhouse Rd. (T10S R24E S17 sw.¼ sw.¼), 1220 m, 21 Jun 1980, *Bartel 1022* (UC), open granite slope in *Pinus ponderosa-Quercus chrysolepis* mosaic, associated with *Arctostaphylos viscida*, *Brodiaea elegans*, *Bromus carinatus*, *Lupinus stiversii*, *Pellaea mucronata*, and *Penstemon laetus*.

Previous knowledge. Known from Kern, Tulare, and Fresno Cos. from metamorphic slate substrate (Howell, Leaflet. W. Bot. 10:182–183. 1965).

Significance. First record for Madera Co., a range extension nw. of 28 km. First collection from granite. Recently numerous other Fresno Co. stands have been noted by the author and officers of the Sierra Natl. For. on granite in the Tollhouse area and on slate near Pine Flat Reservoir. Voucher specimens are not yet deposited. Many colonies on granite appear to be new invasions of open rock outcrops and roadcuts, suggesting a recently evolved ecotype. Considered rare but not endangered by CNPS (Smith et al., CNPS Spec. Publ. 1, ed. 2. 1980). Dropped from review as potentially endangered by the U.S. Fish and Wildlife Service (Fed. Reg. 45:82559. 1980).—JIM A. BARTEL, U.S. Fish and Wildlife Service, Endangered Species Office, 1230 "N" Street, Sacramento, CA 95814. (Received 27 Oct 1980; accepted 13 Nov 1980; revised version received 5 Jan 1981.)

THELYPODIOPSIS PURPUSII (Brandegee) Rollins (BRASSICACEAE).—USA, NM, Socorro Co.: Sevilleta Wildlife Refuge, Los Pinos Mts., canyon directly e. of Nunn-Burris Ranch site, ca. 1825 m: 19 Apr 1975, *Manthey 27* (UNM); 2 May 1980, *Spellenberg and Ward 5484* (NMC); Sepultura Canyon, ca 1800 m, 19 Apr 1975, *Manthey 55* (UNM); Doña Ana Co., s. end of San Andres Mts., ne. side of Black Mt. (T20S R5E S31 s.-center), 1700–1800 m, 7 May 1980, *Spellenberg and Todsén 5497* (GH, NMC); Otero Co., 5.8 km e. of Hwy 70 e. of Alamogordo in Marble Canyon (T16S R10E S22 se.¼), 1850 m, 11 May 1980, *Spellenberg 5501* (GH). At each site the *Thelypodopsis* was associated with *Juniperus monosperma* and various shrubs and perennial grasses that commonly occur with this tree. Plants were rare at all sites in 1980, possibly due to a "poor" year. Manthey's collections are much more robust; the winter of 1974–75 was considerably wetter. In 1980, plants grew on steep slopes in shelter of rocks or at the protected bases of cliffs and gully banks in relatively inaccessible areas. The species probably is more frequent than collections indicate because spring in NM is often dry and collecting, therefore, not very rewarding.

Previous knowledge. The species has been known for about 75 years from Coahuila, and within the last 20 has been found in w. TX, s. NM, and n. AZ. Its existence in NM was known from a single collection in Luna Co., *Spellenberg 3002*, made in 1973. (Herbaria consulted: GH, NMC, UNM; published sources: Rollins, Contr. Gray Herb. 206:1–18; Wootton and Standley, Fl. New Mex., Contr. U.S. Natl. Herb. 19. 1915. R. Rollins, pers. comm.).

Significance. Besides the new county records and the indication that this species is not especially rare in NM, our 1980 collections clarify the nature of *Thelypodium vernale* Wootton & Standley. That species is known only from the type collection made in 1908 in "low mountains west of San Antonio", Socorro Co., NM (Wootton & Standley, 1915). This collection apparently is lost, as noted in a revision of *Thelypodium*, in which *T. vernale* is excluded from *Thelypodium* and tentatively referred to *Sisymbrium* (Al-Shehbaz, Contr. Gray Herb. 204:1–148. 1973.). We easily "keyed" our collections to *T. vernale*, and the plants match well Wootton and Standley's description. Rollins, after viewing our material, agreed that *T. vernale* and our material are apparently the same,

but stated that they are properly placed in *Thelypodopsis purpusii*, based on the earlier published *Thelypodium purpusii* Brandegee (Brandegee, Zoe 5:232, 1906).

NEMAACLADUS GLANDULIFERUS Jepson var. *ORIENTALIS* McVaugh (CAMPANULACEAE).—USA, NM, Hidalgo Co., in the s. end of the Sierra Rica, ca. 0.4 km w. of the Mexico border and 3.2 km s. of the upper corner of the NM "boot-heel" (T29S R14W S36 ne. ¼), 1440 m, 14 May 1980, *Spellenberg and Ward 5520* (NMC, TEX). Gravelly limestone in an arroyo, very local, only 4 plants, with *Larrea tridentata*, *Calliandra eriophylla*, and other shrubs of the Chihuahuan and Sonoran deserts.

Previous knowledge. Widespread from s. CA and sw. UT to s. AZ and nw. MEX, and known from a number of collections made during activities of the Mexican Boundary Survey in 1852 in the vicinity of present-day El Paso, TX (McVaugh, Amer. Midl. Naturalist 22:521–550. 1939). (Herbaria consulted: ARIZ, ASC, MO, NMC, TEX, UNM, Western NM Univ.; published sources: Correll and Johnston, Man. vasc. pl. Tex. 1970; Martin and Castetter, Checklist gymnosperm. angiosperm. New Mex. 1970; McVaugh, 1939; Wootton and Standley, Fl. New Mex., Contr. U.S. Natl. Herb. 19. 1915).

Significance. This is the only collection of *Nemacladus* that unequivocally originates in NM, although "stony hills near Frontera" as cited by McVaugh for Sonoran records of this species by Charles Wright in 1852 refers to a low range of hills in extreme s. Doña Ana Co., NM, and adjacent CHIH, just w. of present-day El Paso, TX (Gray, Pl. Wrightiana, Tex.–NM, II. 1852; Torrey, Rep. Mex. Bndy. Surv., II, Botany. 1858). Localities of collections stated to be from NM, "in the valley of the Rio Grande below Donana" (McVaugh, 1939) are also indefinite. Doña Ana is the point in NM at which the border turned west from the Rio Grande prior to the Gadsden Purchase. Our collection is the first to be made in the general region in nearly 130 years. It is ca. 165 km se. of the nearest site in AZ in Graham Co. and about that far w. of the early record from near El Paso, TX. The plants are inconspicuous, and though probably not frequent, they simply might have been overlooked in the intervening years.—DARRELL WARD and RICHARD SPELLENBERG, Department of Biology, New Mexico State University, Las Cruces, 88003. (Received 4 Dec 1980; revised version received and accepted 17 Feb 1981.)

CAREX DEWEYANA Schwein. subsp. *DEWEYANA* (CYPERACEAE).—Mexico, Edo. de Hidalgo, Real del Monte, near Pachuca, *Cupressus* forest, 2850 m, 27 Aug 1944 (in fruit), *E. Hernández X.-462* (MSC). Verified by F. J. Hermann, Feb 1979.

Previous knowledge. Range: Lab. and Newf. to sw. Mack. and AK, s. to PA, OH, n. IA, CO, UT and B.C. The weakly differentiated subsp. *leptopoda* (Mack.) Calder & Taylor (incl. *C. deweyana* var. *bolanderi* [Olney] Boott), the characteristic phase of the cordilleran region, extends from B.C. to nw. MT, s. to s. CA, AZ and NM; also in e. Asia. (Herbaria consulted: F, MICH *ex herb.* F. J. Hermann, MSC, WIS; published sources: Braun, Monocotyledoneae [of Ohio]. 1967; Calder and Taylor, Canad. J. Bot. 43:1389–1391. 1965; Great Plains Fl. Assoc., Atlas fl. Great Plains. 1977; Harrington, Man. pl. Colorado, ed. 2. 1964; Hermann, Man. Carices Rocky Mts. and Colorado Basin. 1970; Hermann, Man. Genus *Carex* in Mexico and Central Amer. 1974; Hitchcock et al., Vasc. pl. Pacific Northw., pt. 1. 1969; Johnston, J. Arnold Arb. 25:49–50. 1944; Mackenzie, in N. Amer. Fl. 18, pt. 3:114–117. 1931; Matuda, Las Ciperaceae Edo. Mexico. 1959; Sánchez, Fl. Valle Mexico. 1978.)

Diagnostic characters. Keys to *Carex bromoides* Willd. in Hermann (1974), but clearly set off from that species by its thick, oblong-lanceolate, broader (1.2–1.6 versus 0.8–1.2 mm wide, ca. 3–3.5 instead of 4–5 times as long as wide) perigynia, the dorsal faces of which are nerveless or faintly nerved at base rather than conspicuously several-

nerved; by its paler, usually wider (2–5 rather than 1–2.5 mm wide) leaves; by its thinner and, except for the green central zone, whitish-translucent (instead of often orangish-tinged) pistillate scales; and by its oblong-ovate, broader (1.2–1.6 mm wide, ca. 1.5 times as long as wide) achenes. In *C. bromoides* the achenes are 0.8–1.1 mm wide and ca. 2–2.5 times as long as wide.

Significance. New to Mexico; 2030 km disjunction from nearest known populations in Las Animas and Larimer Cos., CO. One other very wide-ranging temperate species, *Carex interior* Bailey, has a similar range, but it extends farther s. on the Great Plains and reappears in Chihuahua and Distrito Federal, Mexico.—THEODORE S. COCHRANE, Department of Botany, University of Wisconsin, Madison 53706. (Received 10 Dec 1980; accepted 23 Feb. 1981.)

WOLFFIA COLUMBIANA Karst. (LEMNACEAE).—USA, CA, San Diego Co., San Dieguito River, 1.5 km sw. of Lake Hodges Dam, s. side of Hwy S-6 (33°2' N, 117°8' W), 76 m, 26 Sep 1980, *Armstrong s.n.* (SD 106362). Forming dense populations at surface of quiet ponds, mixed with *W. punctata* with combined density of 100–150 per cm² of water surface. Associated with *Lemna gibba*, *Azolla filiculoides*, *Cyperus erythrorhizos*, *Pluchea purpurascens*, *Echinodorus berteroi*, *Paspalum distichum*, *Eclipta alba*, and *Scirpus acutus*.

Previous knowledge. Known from Canada, e. US, Mexico, s. to Colombia. A minute, free-floating rootless angiosperm, barely visible without magnification. Often associated with *Lemna*, *Spirodela*, and *Azolla*. The genus has undoubtedly been overlooked many times because of its small size. (Herbaria consulted: RSA, SD; published sources: Daubs, Ill. Biol. Monogr. 34. 1965; Mason, A fl. marshes Calif. 1957.)

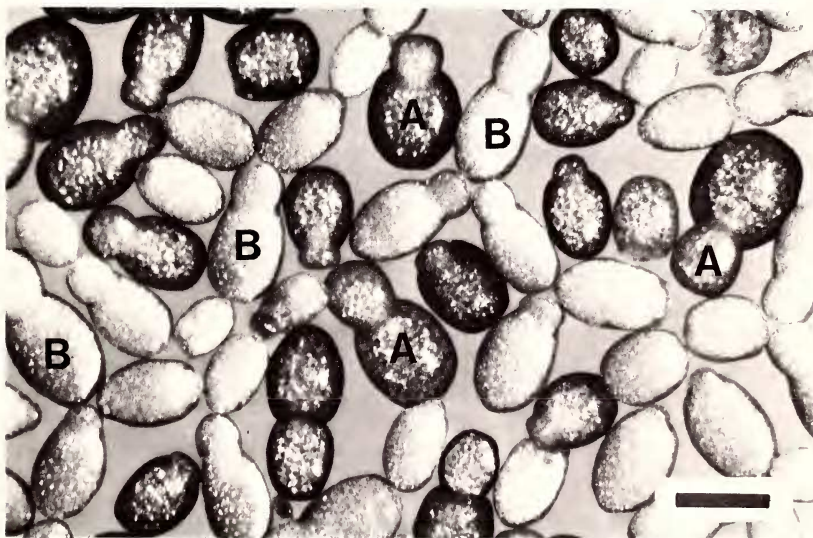


FIG. 1. Dense population of *Wolffia* from the San Dieguito River, San Diego Co., CA. A. *Wolffia columbiana*. B. *W. punctata*. Scale bar is 1 mm.

Significance. First record of *W. columbiana* in s. CA, a se. extension of 387 km from Oso Flaco Lake, San Luis Obispo Co. This species is clearly distinguished from *W. punctata* by its globose frond which is minutely roughened, but not flattened, on the dorsal surface (Fig. 1).—WAYNE P. ARMSTRONG, Palomar College, San Marcos, CA 92069. (Received 26 Nov 1980; accepted 23 Feb 1981.)

CALYPTRIDIMUM PULCHELLUM (Eastw.) Hoov. (PORTULACACEAE).—USA, CA: Mariposa Co.: three small, widely separated populations on ridge e. of Ben Hur Rd. (T6S R18E S14 e.½ se.¼ and S24 nw.¼ nw.¼), 592 m, 1 May 1980, *Hamon 8019* (UC, FSC); this site is thought to be Pea Ridge, the type locality, found with *Lupinus deflexus* and a pale color form of *Lupinus stiversii*; granite dome 100 m w. of Mariposa Cr. and 400 m n. of Buckeye Rd. on the Jack Kirk Ranch (T6S R18E S11 se.¼ nw.¼), 460 m, 11 May 1980, *Hamon 8064* (UC, FSC, HSC), with *Lupinus deflexus* and *Streptanthus diversifolius*; Madera Co.: s. slope of small hill, 400 m w. of Ahwahnee (T6S R20E S36 ne.¼), 730 m, 26 May 1980, *Hamon*, pers. obs. (no collection made because of extremely small, impacted population), associated with *Lupinus stiversii*; Indian Lakes Estates, 3 km e. of SH41 on Road 417 (Picyune Rd.) two populations 400 m apart (T8S R21E S28), 610 m: 11 May 1980, *Hamon 8049* (UC, FSC); 17 May 1980, *Hamon 8067* (UC): these are the largest populations noted, associated with *Lupinus citrinus*, *Mimulus layneae*, *Streptanthus diversifolius*; Fresno Co., decomposed granite outcrop on e.-facing slope 2 km sw. of Sugarloaf Hill, Sierra Natl. For. (T9S R24E S30 sw.¼ sw.¼), 1097 m, 20 May 1980, *Hamon 8078* (UC) associated with *Lupinus citrinus* and *Camissonia hirtella*.

Previous knowledge. Collected only twice; originally at "Pea Ridge" by J. W. Congdon on 19 April 1901 (Eastwood, *Bull. Torrey Bot. Club* 29:79. 1902) and then by R. F. Hoover in 1938 (Hoover, *Leaf. W. Bot.* 2:222–225. 1940). Thought to occur only in the type locality (Hinton, *Brittonia* 27:197–208. 1975) and categorized as possibly extinct (CNPS Spec. Publ. 1. 1980).

Diagnostic characteristics. Diminutive annual with sparsely fibrous root system. Inflorescence terminal and paniculate, stigma not sessile, inserted anthers a pale, rose-red that fades to yellow on drying.

Significance. Rediscovery of species presumed extinct, with new records for Fresno and Madera Counties. Only one population found on public land (Sierra Natl. For.) with all others endangered by foothill real estate development. All populations were only a few meters in diameter with few individual plants.—DAN HAMON, 2823 E. Lansing Way, Fresno, CA 93726. (Received 9 Jan 1981; accepted 18 Feb 1981.)

NOTES AND NEWS

SPECIFIC STATUS FOR *Trifolium haydenii* VAR. *barnebyi* (FABACEAE).—In 1947 H. Dwight Ripley and Rupert Barneby collected an unusual *Trifolium* in the foothills of the Wind River Mountains in Wyoming. This collection was referred by Gillett (*Canad. J. Bot.* 50:1975–2007. 1972) to *T. gymnocarpon* Nuttall, with the comment that, forwardly directed hairs on the ovary "eliminates the possibility of its being *T. haydenii* as originally identified. The leaflets, too, which are quite glabrous, fit the shape of those of *T. gymnocarpon*." More recently Isely (*Brittonia* 32: 55–57. 1980) described *T. haydenii* Porter var. *barnebyi* from the same collection. Both Gillett and Isely had only the original material to work with. This past summer we revisited the original locality, made extensive observations on the population, and collected more material. It was